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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,754	01/28/2005	Nobuhisa Miyake	02610.0044	9339

22852 7590 11/30/2007

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EXAMINER	
SHIAO, REI TSANG	

ART UNIT	PAPER NUMBER
1626	

MAIL DATE	DELIVERY MODE
11/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/522,754	MIYAKE ET AL.	
	Examiner	Art Unit	
	Rei-tsang Shiao, Ph.D.	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/31/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This application claims benefit of the foreign application:

JAPAN 2002-229385 with a filing date 08/07/2002.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc. In the instant case, the abstract contains more than 150 words. Correction is required.

3. Claims 1-18 are pending in the application.

Information Disclosure Statement

4. Applicant's Information Disclosure Statement, filed on May 31, 2005 has been considered. Please refer to Applicant's copy of the 1449 submitted herein.

Responses to Election/Restriction

5. Applicant's election of Group I claims 1-18, in part, in the reply filed on October 15, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 1-18 are pending in the application. The scope of the invention of the elected subject matter is as follows.

Claims 1-18, in part, drawn to processes of making carbonic ester compounds of the formula RO(CO)OR, wherein the organometal compounds are selected from compounds of formula (1) or (2) thereof. Claims 1-18, in part, embraced in above elected subject matter, are prosecuted in the case. Claims 1-18, in part, not embraced in above elected subject matter, are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

The requirement is still deemed proper.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a process for making carbonic ester compounds of the formula RO(CO)OR, wherein the organometal compounds are selected from compounds of formula (1) or (2), it does not reasonably provide enablement for

carbonic ester compounds or organometal compounds without limitation (i.e., no formula), see claims 1-3. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Dependent claims 2-18 are also rejected along with claim 1 under 35 U.S.C. 112, first paragraph.

In *In re Wands*, 8 USPQ2d 1400 (1988), factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described. They are:

1. the nature of the invention,
2. the state of the prior art,
3. the predictability or lack thereof in the art,
4. the amount of direction or guidance present,
5. the presence or absence of working examples,
6. the breadth of the claims,
7. the quantity of experimentation needed, and
8. the level of the skill in the art.

In the instant case:

The nature of the invention

The nature of the invention is a process for making carbonic ester compounds, wherein the carbonic ester compounds and organometal compounds are not limited (i.e., no formula), see claim 1.

The state of the prior art and the predictability or lack thereof in the art

The state of the prior art is that a similar process, wherein the carbonate ester having a formula, i.e., R^3O-$COOR^6$, see column 41 of Tsuneki et al. US 5,543,546.

The amount of direction or guidance present and the presence or absence of working examples

The only direction or guidance present in the instant specification is the example compounds on pages 120-144 of the specification. There is no data present in the instant specification for the starting material alkoxylated amine without limitation (i.e., no formula).

The breadth of the claims

The instant breadth of the rejected claims is broader than the disclosure, specifically, the carbonic ester compounds and organometal compounds are not limited (i.e., no formula).

The quantity or experimentation needed and the level of skill in the art

While the level of the skill in the chemical arts is high, it would require undue experimentation of one of ordinary skill in the art to resolve any carbonic ester compounds and organometal compounds. There is no guidance or working examples present for constitutional any carbonic ester compounds and organometal compounds for the instant invention. Incorporation of the limitation of the carbonic ester

compounds and organometal compounds (i.e., RO(CO)OR and formula (1) or (2)) into claim 1 would overcome this rejection.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites step (3) for a process for making carbonic ester, see lines 21-30. However, it is not clear what is the key elements of step (3) for the instant process. Step (3) of claim 1 dose not state how the final product carbonic ester is obtained from the second organometal compound mixture. Clarification is required. Dependent claims 2-18 also rejected along with claim 1 under 35 U.S.C. 112, second paragraph.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by (1) Itakura et al. CAS: 130:168016 (i.e., JP 11035521); (2) Ko et al. CAS: 122:290332 (i.e., JP 07033715); or (3) Yamazaki et al. CAS: 90:168087 (i.e., JP 54003012).

Applicants claim a process for making carbonic ester compounds by reacting organometal compounds with carbon dioxide, see claim 1.

Itakura et al. disclose a process of making carbonic ester compounds by reacting $Bu_2Sn(OMe)_2$ (i.e., organometal compounds) and carbon dioxide, it clearly anticipate the instant process.

Ko et al. disclose a process of making carbonic ester compounds by reacting $Bu_2Sn(OMe)_2$ (i.e., organometal compounds) and carbon dioxide, it clearly anticipate the instant process.

Yamazaki et al. disclose a process of making carbonic ester compounds by reacting $Bu_2Sn(OMe)_2$ (i.e., organometal compounds) and carbon dioxide, it clearly anticipate the instant process.

Dependent claims 2-18 are also rejected along with claim 1 under 35 U.S.C. 102(b).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being obvious over (1) Itakura et al. CAS: 130:168016 (i.e., JP 11035521); (2) Ko et al. CAS: 122:290332 (i.e., JP 07033715); or (3) Yamazaki et al. CAS: 90:168087 (i.e., JP 54003012).

Applicants claim a process for making carbonic ester compounds by reacting organometal compounds with carbon dioxide, see claim 1.

Determination of the scope and content of the prior art (MPEP §2141.01)

Itakura et al. disclose a process of making carbonic ester compounds by reacting $Bu_2Sn(OMe)_2$ (i.e., organometal compounds) and carbon dioxide. Ko et al. disclose a process of making carbonic ester compounds by reacting $Bu_2Sn(OMe)_2$ (i.e., organometal compounds) and carbon dioxide. Yamazaki et al. disclose a process of making carbonic ester compounds by reacting $Bu_2Sn(OMe)_2$ (i.e., organometal compounds) and carbon dioxide.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the instant claims and Itakura et al., Ko et al., or Yamazaki et al. is that the instant claims are silent on the scope of organometal compounds. Moreover, Itakura et al., Ko et al., or Yamazaki et al. are silent on the processes of preparing organometal compounds of the instant invention. Itakura et al., Ko et al., or Yamazaki et al. processes overlap with the scope of the instant invention.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the instant claims 1-18 prima facie obvious **because** one would be motivated to employ the processes of Itakura et al., Ko et al., or Yamazaki et al. to obtain the instant processes, wherein carbonic ester compounds are prepared by reacting organometal compounds with carbon dioxide. Dependent claims 2-18 are also rejected along with claim 1 under 35 U.S.C. 103(a).

The motivation to obtain the claimed catalyst derives from known Itakura et al., Ko et al., or Yamazaki et al. processes would possess similar yields to that which is claimed in the reference.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with37 CFR 3.73(b).

Claims 1-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of Miyake et al.

co-pending application No. 10/495,451. Although the conflicting claims are not identical, they are not patentably distinct from each other and reasons are as follows.

Applicants claim processes of making carbonic ester compounds of the formula RO(CO)OR, wherein the organometal compounds are selected from compounds of formula (1) or (2), see claims 1-3.

Miyake et al. claim processes of making carbonic ester compounds (i.e., symmetrical), wherein the organometal compounds are selected from compounds of formula (1) or (2).

The difference between the instant claims and Miyake et al. is that the instant claims are silent on a symmetrical carbonic ester. Miyake et al. processes overlap with the instant invention.

One having ordinary skill in the art would find the instant claims 1-18 prima facie obvious **because** one would be motivated to employ the processes of Miyake et al. to obtain the instant processes, wherein the carbonic ester compounds of the formula RO(CO)OR is obtained , and the organometal compounds are selected from compounds of formula (1) or (2). Dependent claims 2-18 are also rejected along with claim 1 under the obviousness-type double patenting.

The motivation to obtain the claimed catalyst derives from known Miyake et al. processes would possess similar yields to that which is claimed in the reference.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Objections

11. Claims 1-18 are objected to as containing non-elected subject matter, i.e., organometal compounds other than formula (1) or (2), etc. It is suggested that applicants amend the claims to the scope of the elected subject matter as defined on the page 2 *supra*.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rei-tsang Shiao whose telephone number is (571) 272-0707. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rei-tsang Shiao, Ph.D.
Patent Examiner
Art Unit 1626

November 28, 2007